



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,383	12/27/2001	Christopher Pasqualino	13311US02	8696

23446 7590 10/13/2005

MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/034,383

Applicant(s)

PASQUALINO ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment (22 Dec 04).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Applicant's arguments filed 22 Dec 04 have been fully considered but they are not persuasive.

#### *Applicant's Arguments*

- a. Applicant states that the IBM disclosure does not "DC balance" said at least one component and said at least data bit.
- b) Applicant traversed the examiner's "OFFICIAL NOTICES" taken in the previous action.

#### *Examiner's Response*

- a. The examiner disagrees. As stated in the IBM disclosure "For each block of six bits transmitted, three bits are always at a "one" level and three bits are at a "zero" level. This feature eliminates low frequencies from the spectrum, permits AC coupling and provides for a large dynamic range." Thus although, the words "DC balance" do not appear, the function of providing an equal number of ones and zeroes is "DC balancing", thus the limitation is met. The examiner has cited numerous references, which disclose this concept/fact:

US 6,304,196 (col 1, line 27-47);

US 6,748,567 (col 1, line 36-58).

- b. The examiner has provided references disclosing such conventional features:

Pertaining to CRC/Hamming bits:

US 6,304,196 (col 3, line 26-42)

US 6,748,567 (Figs 1, 2)

Pertaining to splitting 8 bit color data:

US 5,734,369 (Fig 2, col 2, line 4-20).

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by 1988 IBM Technical Disclosure #NN8812461. The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display. As described the interface includes circuitry for "encoding" video for transmission between the controller/pc system and its CRT display, wherein the interface includes:

1) A multiplexer for concatenating at least one data (e.g. that which represents horizontal sync, vertical sync, and/or the serial data channel signal/command data) the red, green, blue, and

2) A block code arrangement for balancing the entire multiplexed data stream, via the utilization only "balanced" codes, thereby eliminating low frequencies from the spectrum" while permitting 'AC coupling'.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2a. Claims 3 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect the limitations of claim 1. Claims 3 and 7-11 differ from the system described in the technical disclosure only in that said claims recite steps for correcting the video signal for erroneous pixels caused by transmission errors via various forms of pixel replacement (i.e. via replacement with a previously received correct value or a value obtained by the interpolation/averaging of surrounding correct pixel values);

The examiner takes Official Notice that it was conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional

Art Unit: 2614

overhead data to allow erroneous pixels to be replaced using well known pixel replacement techniques performance immunity).

2b. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.

Claims 4 and 6 differ from the system described in the technical disclosure only that said claims specify said concatenated data as being "audio" and "status" data/information.

The examiner maintains that would have been obvious to one of ordinary skill in the art to have used the "data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

2c. Claims 12, 13, 18, 21, 22, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.

The claims differ from the system described in the technical disclosure only in that the claim indicates that the data component to which at least one obtained by "splitting" component out from input data. The IBM disclosure does not specify the source of the red, green, blue, and intensity video component described concatenated therein.

Art Unit: 2614

The examiner takes Official Notice that it was notoriously well known in the art for the video that's transferred between a controller/PC and its CRT display to have been originated from a composite signal source thereby requiring the splitting" the video components prior to transmission. The examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized the interface described the IBM disclosure to have "split" and conveyed data from such conventional source as was known in the art.

2d. Claims 15 and 16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 12.

Claims 15 and 16 differ from the system described in the technical disclosure only in that said claims recite the addition of CRC codes to the transmission;

The examiner takes Official Notice that conventional CRC codes were to have added overhead bits/data (e.g. such as bits) transmitted video data to detect and correct erroneous pixel values caused by transmission errors;

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replaced using well known pixel replacement techniques thereby advantageously providing improved performance noise immunity).

2e. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 22.

Claim 24 differs from the system described in the technical disclosure only in that said claim recites the addition of CRC codes to the transmission;

The examiner takes Official Notice that it was conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous pixel values caused by transmission errors;

The examiner maintains that to one of ordinary skill in the art to have modified the interface described the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques thereby advantageously providing improved performance noise immunity).

2f. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its display as was set forth above with respect to the limitations of claim 12.

Claims 17 and 19 differ from the system described the technical disclosure only in that said claims specify said concatenated data as being "audio" and "status" data/information.



The examiner maintains that it would have been obvious to one of ordinary skill in the art to have used the "data channel" the interface described the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

2g. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 22.

Claims 25 and 27 differ from the system described in the technical disclosure only in that said claims specify said concatenated data as being "audio" and "status" data/information.

The examiner maintains that it would have been used the "data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

2h. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 12.

Claim 14 differs from the system described in the technical disclosure only in that said claims specify said split data is eight the IBM disclosure color pixel data; the data appears to be 4 bit color pixel data.

The examiner takes Official Notice that it was well known in the art for the video data that is transferred from a controller/pc to a CRT display to have comprised eight bit (or greater) color pixel data.

The examiner maintains that would have been obvious to transmit video data having at least eight bits thereby providing a larger pallet of colors a "real" image capability). Obviously, the number of balanced codes would have been expanded accordingly.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—see newly cited references on attached form PTO-892.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (571)272-7352.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(571)-273-8300**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is  
(703)305-HELP.

General information about patents, trademarks, products and services offered by the United States Patent and Trademark Office (USPTO), and other related information is available by contacting the USPTO's General Information Services Division at:

800-PTO-9199 or 703-308-HELP

(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

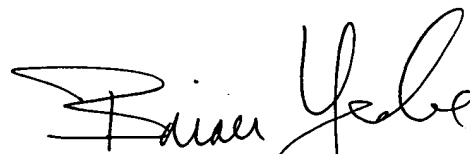
The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS).

PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.



B.P.Y.

11 October 2005



BRIAN YENKE  
PRIMARY EXAMINER